including 75,484 patients concluded that both early and late stent thrombosis were higher in the biodegradable polymer groups over second-generation DES. These findings may partially explain the higher rate of myocardial infarction in the 6-weeks DAPT group (5).

Given the unequivocal nature of the current data, it is important to understand these individual endpoints on a stent level. Whereas a strategy of a shorter duration of DAPT may be reasonable in second-generation DES, a longer duration of DAPT will likely be needed in the bioabsorbable/degradable stent platforms.

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REPLY: Duration of Triple Therapy in Patients Requiring Oral Anticoagulation After Drug-Eluting Stent Implantation

We appreciate the comments of Dr. Philip regarding the results of our ISAR-TRIPLE (Duration of Triple Therapy in Patients Requiring Oral Anticoagulation After Drug-Eluting Stent Implantation) trial (1). We could not find a significant difference in clinical outcomes between a 6-week and a 6-month triple therapy duration in patients who received drug-eluting stents (DES) and had an indication for oral anticoagulation. Dr. Philip is concerned that a shorter triple therapy might not apply to biodegradable polymer (BP)-based DES (BP-DES) or fully bioresorbable DES. In Dr. Philip's opinion, on the basis of the results of 2 network meta-analyses, BP-DES, when compared with second-generation DES, are associated with an increased risk for stent thrombosis and/or myocardial infarction and, consequently, may need a longer therapy duration. Our study certainly lacks the power to look at differential treatment effects in subgroups defined by the type of DES used. However, 3 of the 6 cases that incurred myocardial infarction in the 6-week therapy group had received new-generation everolimus-eluting stents (EES). In total, there was no significant interaction between the use of BP-DES or EES and duration of triple therapy regarding ischemic events. Moreover, with only 6 patients (7 lesions) with fully bioresorbable stents, we cannot make any statement about the optimal triple therapy duration for this particular device.

We would also like to highlight 3 more points. First, categorization of DES into first- and second-generation or biodegradable polymer and permanent polymer groups does not necessarily mean that the devices included in each of these categories are equally safe and effective. We have previously shown that BP-DES with limited representation in the 2 meta-analyses cited by Dr. Philip show superior results to sirolimus-eluting stents at 4 years (2) and equivalent results to EES at 5 years (3). Second, direct comparative randomized trials (and meta-analyses of these direct comparisons) constitute the highest level of evidence to guide our patient care. Where direct comparative randomized trials exist, their role cannot be supplanted by indirect comparison network meta-analyses irrespective of how sophisticated they are. Specifically, 2 randomized trials of BP-DES versus EES (4,5) are the only relevant direct comparison trials included in the 2 network meta-analyses quoted by Dr. Philip. Neither trial showed differences between BP-DES and EES regarding both stent thrombosis and myocardial infarction ($p \geq 0.18$). A simple pooling together of these 2 studies, which enrolled a total of 5,942 patients, will yield a 1-year incidence of myocardial infarction of 3.0% in the BP-DES group and 2.9% in the EES group as well as an incidence of definite and probable stent thrombosis of 0.5% in the BP-DES group and 0.4% in the EES group (4,5). Thus, the direct comparison randomized trials do not support the existence of a significant safety disadvantage of BP-DES versus EES. Finally, awareness of an excess thrombotic risk with a certain DES among the multitude of DES that are currently available should reasonably lead to the

avoidance of its use rather than extension of antithrombotic therapy duration.

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